

ANNALS OF THE SOUTH AFRICAN MUSEUM

VOLUME XLII

1. *A Note on some Rhynchosaurian Remains from Tanganyika Territory.* By LIEUWE
D. BOONSTRA, D.Sc.

(With 2 text-figures.)

FROM Mr. G. M. Stockley I have received three tins containing fossil remains from near Msamara, in the Tunduru district of the Southern Province of Tanganyika Territory, for determination. This material (S7662) consists of weathered fragments of skull, limb-bones and vertebrae. The largest skull fragment consists of part of the left upper jaw. The limb-bones include a proximal third of a right femur, a weathered distal end of a femur, a bit of humerus, scapula and tibia. The vertebral material consists of the weathered centra of dorsal and caudal vertebrae showing few distinctive features.

SKULL (fig. 1)

This weathered and rolled fragment consists of part of the left jugal, maxilla and palatine. On the lateral surface two nutritive foramina pierce the maxilla. The dentigerous border of the maxilla is convex antero-posteriorly. The ventral surface of the maxilla is studded with a large number of worn peg-like teeth varying in diameter from 2 to 4 mm. These teeth are somewhat indefinitely arranged, but there does appear to be some indication of an alignment in four rows. The teeth on the inner or lingual margin of the maxilla are aligned in a fairly definite row. On the outer or labial margin and anteriorly the teeth are larger than those situated medio-posteriorly. The width of the dentigerous surface is wider posteriorly than anteriorly. Medial to the maxillary teeth there lies a groove filled with matrix, and the maxillo-palatine suture would lie along this groove. Lingual to this groove there lies a row of teeth on the labial border of the palatine, with at least three more indefinite rows of teeth lingually. As is the case with the maxilla the width of the dentigerous surface is posteriorly wider than anteriorly. As preserved, the length of the maxillary dentigerous surface is 100 mm., the width anteriorly 7 mm. and posteriorly 20 mm.

The nature of the dentigerous plate of the maxillo-palatine indicates that we have here a fragment of a Rhynchosaurian skull showing particular affinities

to *Scaphonyx australis* described by Von Huene from South America, *Hyperodapedon gordonii* described by Huxley from Scotland, and *Hyperodapedon huxleyi* described by Lydekker from India. The length of the dentigerous surface in this specimen from Tanganyika is, as preserved, greater than in these three known forms.

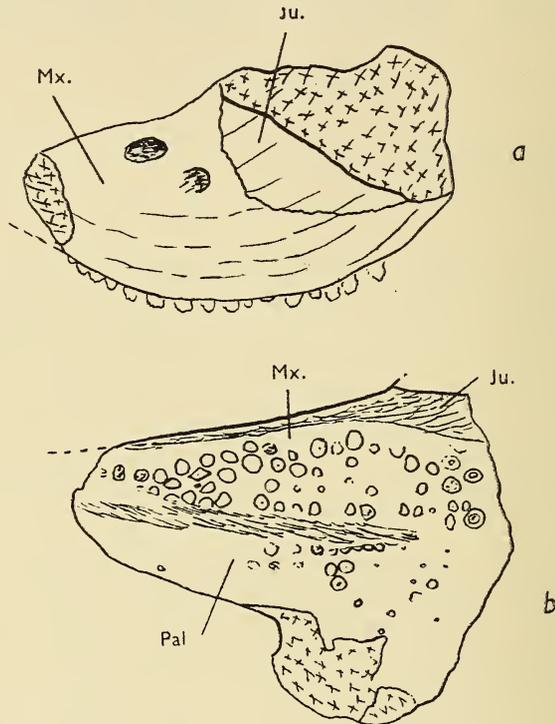


FIG. 1.—Maxillo-palatine complex of *Scaphonyx stockleyi*. a, lateral view ($\times \frac{1}{2}$). b, ventral view ($\times \frac{1}{2}$). S.A.M. 11704.

In *H. gordonii* the teeth are placed in rows much more definitely than in the Tanganyika specimen; in the former there are two rows on the maxilla whereas in the latter there are possibly four rows; and the width of the dentigerous surface of the maxilla is also smaller in *H. gordonii*.

In *H. huxleyi* the teeth are also in much more definite rows, and the number of rows on the maxilla exceed those on the palatine. In the Indian beast the crowns form triangular pyramids whereas in the Tanganyika beast the crowns are bluntly conical.

In *Scaphonyx australis* the teeth are of very similar shape and have very nearly the same arrangement. But, whereas the anterior maxillary teeth are larger than the posterior ones in the Tanganyika specimen, the reverse is the case in the South American specimen.

From the available evidence, admittedly scanty, it would thus appear that we have here a type distinct from all the hitherto known Rhynchosaurians, but apparently approaching fairly closely the skull fragment described by Von Huene from South America and by him referred to as *Scaphonyx australis*. I propose that the Tanganyika beast be included in Smith Woodward's genus *Scaphonyx*, but to be distinguished from the hitherto known species and to be known under the name *Scaphonyx stockleyi* n.sp.

Type.—Skull fragment in the South African Museum, S.A.M. 11704.

FEMUR (fig. 2)

The proximal third of a weathered right femur is preserved. The post-axial corner with the external trochanter is missing. Noteworthy features of this fragment are: the caput femoris is bent sharply dorsally; the internal tro-

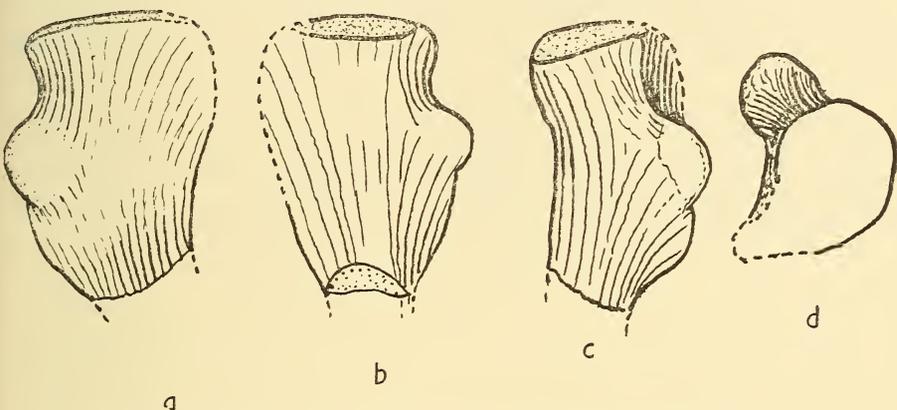


FIG. 2.—Proximal end of femur of *Scaphonyx africanus*. *a*, ventral view ($\times \frac{1}{2}$). *b*, dorsal view ($\times \frac{1}{2}$). *c*, pre-axial view ($\times \frac{1}{2}$). *d*, articular surface ($\times \frac{1}{2}$). S.A.M. 11705.

chanter forms a prominent bulbous structure and is abruptly demarcated from the caput, and is situated some distance distally from the proximal articular surface; the inter-trochanteric fossa is comparatively shallow, but, because of the curvature of the bone and the presence of a low ridge, is clearly separated from the more distal ventral surface of the bone; the proximal articular surface is wide dorso-ventrally; the external trochanter was probably not strongly developed and the ilio-femoralis flange not extensive.

This femur is about half the size of that (S344) described by Haughton under the name *Stenaulorhynchus stockleyi* but is obviously of a related type. Apart from the difference in size it differs in the shape of the caput; the internal trochanter is situated further distally; is more bulbous and is abruptly separated from the caput without a connecting neck. This femur, although also only half the size, shows closer affinities to that of *Scaphonyx fischeri* and *Scaphonyx australis* as described and figured by Von Huene. But here also the nature of the internal trochanter is strikingly different, and the femur cannot be considered as being that of either of these two South American species.

If Von Huene is correct in assigning his skull fragment and femoral fragment to the same species (*Scaphonyx australis*), we have a dentigerous plate of 80 mm. associated with a femur proximally 80 mm. wide. In the Tanganyika material we have a dentigerous plate of at least 100 mm., and we would thus expect that the associated femur would have a width proximally of about 100 mm. Actually the femur under consideration cannot proximally be of a greater width than 50 mm. The femur can thus only be of a younger beast or of a smaller species. The ossification of the femoral fragment does not appear to be that of an immature half-grown animal, and is thus in all probability that of a species of half the size of *Scaphonyx australis*. For this species I propose the name *Scaphonyx africanus*.

Type.—Proximal third of a right femur, S.A.M. 11705.

The discovery by Mr. Stockley of these definite Rhynchosaurian remains in Tanganyika, together with the Rhynchosaurian limb-bones of *Stenaulorynchus stockleyi* previously described by Haughton from Njalila, will enable the stratigraphists to attempt a closer correlation of these beds with those that have yielded the species of *Hyperodapedon*, *Scaphonyx*, and the other closely related genera. The discovery of better-preserved material may make it necessary to remove these species from the genus *Scaphonyx* to a new genus. Until such time I do not think it necessary to create a new genus for these African forms.